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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/072,039 | 02/05/2002 | Oliver Schreck | P02,0018 | 3794 |

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| EXAMINER | |
|---|---|
| ROY, BAISAKHI | |
| **ART UNIT** | **PAPER NUMBER** |
| 3737 | |

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/072,039 | SCHRECK, OLIVER | |
| | Examiner | Art Unit | |
| | Baisakhi Roy | 3737 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jesmanowicz et al. in view of Darrow et al. (5584293). Regarding claims 1, 2, 4-6, 7, 14, and 15, Jesmanowicz et al. disclose a method and apparatus for functional MRI including obtaining and storing a plurality of images with and without stimulation together with information indicating whether the image was registered with or without stimulation and with at least one image related stimulation value such as the type of stimulation and information describing a point in time of said stimulation (col. 2 lines 41-67, col. 10 lines 45-60). Jesmanowicz et al. further teach determining an "image-related correlation values" or images wherein points of highest intensity correspond to points of highest correlation or coincidence to better differentiate between activated and non-activated brain regions (col. 3 lines 6-18, col. 6 lines 23-38 and claim 1). The reference further teaches filtering out some images that should be ignored during the evaluation (col. 3 lines 51-66). In reference to the storage of each image with information

independent of the picture elements or the storage of parameters with the image, Jesmanowicz et al. do not explicitly teach storing of image data with information different from the image. In the same field of endeavor, Darrow et al. disclose a MR method where imaging parameters different from the image data are stored with the image data (col. 2 lines 12-25 lines 33-47, col. 4 lines 1-35, fig. 2). It would have therefore been obvious to one of ordinary skill in the art to use the teaching by Darrow et al. to modify the teaching by Jesmanowicz et al. for the purpose of providing all relevant information together with the image data and therefore enabling a repeated evaluation at a later point in time.

Regarding claims 3, 9, 12, and 13, Jesmanowicz et al. further teach triggering a neural activity by a stimulus or sensory stimulator which could be in the form of optical stimulation and a stimulation source to measure the pulse intensity of an electrical pulse (col. 10 lines 45-60).

Regarding claim 8, Jesmanowicz et al. teach obtaining information describing the intensity level of the applied stimulus (col. 2 lines 57-60).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jesmanowicz et al in view of Darrow et al. and further in view of Apkarian et al.

(6018675). Jesmanowicz et al. teach a functional MRI method and apparatus for obtaining images with and without stimulation as set forth above, but do not explicitly teach the use of a pressure-exerting stimulus. In the same field of endeavor, Apkarian et al. disclose a pain measurement system based on comparative functional magnetic resonance imaging (MRI) of the brain of a subject. In the disclosed system, measurements quantifying a subject's pain level are made by comparing images of the subject's brain when the subject is in pain with the corresponding brain images made when the subject is not in pain (abstract, col. 2 lines 43-53). It would have therefore been obvious to one of ordinary skill in the art to use the pressure-exerting stimulation source teaching by Apkarian et al. to modify the teaching by Jesmanowicz et al. and Darrow et al. for the purpose of imaging a subject's response to pain or pressure.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jesmanowicz et al. in view of Darrow et al. and further in view of Kassai et al. (5771893). Jesmanowicz et al. as set forth above, teach a functional MRI method and apparatus for obtaining images with and without stimulation but do not explicitly teach the use of an acoustic stimulus. In the same field of endeavor, Kassai et al. disclose a method and apparatus of obtaining functional images with and without stimulation (abstract) with said stimulation being an acoustic stimulation (col. 12 lines 39-45). It would have therefore been obvious to one of ordinary skill in the art to use the acoustic stimulation teaching by Kassai et al. to modify the teaching by Jesmanowicz et al. and Darrow et al. for the purpose of obtaining images of a subject's response to an acoustic stimulation.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baisakhi Roy whose telephone number is 571-272-7139. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BR

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ALI IMAM
PRIMARY EXAMINER